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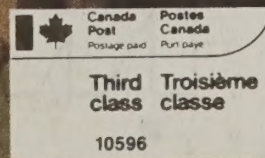
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*Cat That
Learned CW*

*Manitoulin
VHF*

*WARC-92
Reports*

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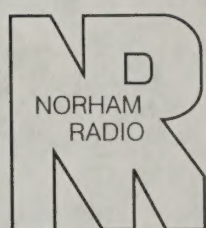
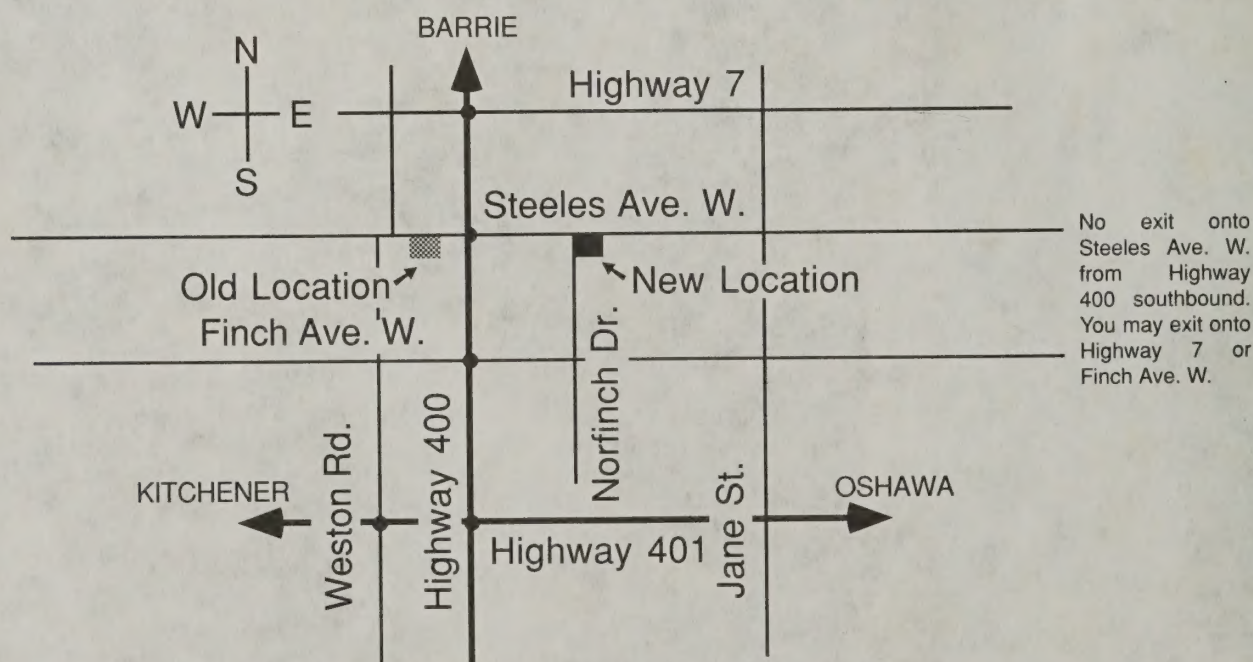
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QST CANADA

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ABOUT THE COVER



We reached into our files for this one! Well known Canadian DXer Garry Hammond, VE3XN, operates HV3SJ on a visit to the Vatican back in March, 1988. ■

It Seems to Us.../Il nous semble...

The New CPC 2-0-03: Another Look

A few weeks ago, I received some documents from the Radio Advisory Board of Canada (RABC) Land, Fixed and Mobile Committee, of which CRRL is a member. Among the usual minutes and reports was a new provisional document from DOC dated 1992 February 1: *CPC-2-0-03, Issue 2, Environmental Assessment Process Associated with Spectrum Management Activities*. I grabbed it and started reading. So did our editor over in London, Harry MacLean, VE3GRO, whose comments on the document appeared in this column in last month's *QST Canada*.

At this time, I would like to comment on the document's Appendix C: "Minimum Safe Distance Calculations for Non-Ionizing Radiation in Accordance with Safety Code 6". I have some grave reservations regarding the application of the calculations—and the curves based on these calculations—to the Amateur Service. I am particularly concerned about how these curves could affect amateurs who are members of the HF and VHF DX communities.

1. The curves are based on 100-percent duty cycle, presumably over an eight-hour day—in other words, an occupational dose. What if a neighbour who objects to having an amateur in the neighbourhood decides to make life difficult by citing the curves to a municipality? What if the neighbour then asks for an injunction against operating until the amateur proves that his levels of radiation are safe? By the time things work their way through the bureaucracy, the amateur may be collecting butterflies instead of operating his or her radios.

2. How can a technically illiterate public be expected to convert the curves so they will apply to amateur stations that use directional antennas on high towers? Will the burden of proof of safety be put on the amateur? What if the amateur changes antenna, power level or mode of operation? Will an environmental assessment be needed each time? Aside from what is in the motherhood statements at the beginning of Appendix C, just how are we to comply with the requirements?

3. Amateur Radio is a progressive, experimental service that supports a strong worldwide VHF-UHF DX community that uses high ERP in moonbounce, meteor-scatter, F-layer and auroral communications. The curves in Appendix C threaten to destroy the ability of the amateur community to design, construct and utilize innovative communications systems. Amateurs have been exploring and utilizing the vast resources of the VHF-

UHF bands for some 60 years, but DOC does not acknowledge these activities, and acts as if we use the higher bands only for relatively low-power repeater and packet operation.

4. Amateurs have been communicating by satellite for some 30 years. The curves threaten our ability to communicate by satellite.

5. Amateurs compete in contests, both on the HF and the VHF-UHF bands. This competition encourages the use of high power and large antenna systems. The curves threaten to impair our ability to compete. We could become a third-rate power in the contest world.

The above comments are my own. However, as a VHFer and a professional engineer working in "an area of risk", I see no end to problems related to the curves in Appendix C, and the interpretation of these curves by the public, municipalities and even DOC staff. The Amateur Service should not be expected to comply with these curves, which may be fair for services where transmitters are run "key down" eight to twenty-four hours-a-day into certain types of antennas, but have little to do with the way we operate in the Amateur Service.

Some related thoughts: DOC wants to mandate compliance with these curves, but there is still no worldwide consensus on the exact effects of RF on the human body. Thus, we feel that DOC's action in bringing out this document is very premature. To date, there has been little opportunity for input. You have to wonder if DOC is more concerned with being expedient than fair. We do need time to study this document. This is why Ernie Welling, President of RABC, recently stated: "As the Board [RABC] was not consulted and did not take part in the discussion of this proposed circular, [and] our sponsor members are seeing it for the first time and are expressing concern that it should be reviewed in depth.... RABC requests that an extension of the closing date for comments to May 30, 1992, be granted".

To solidify the amateur position, Ralph Cameron, VE3BBM, representing CARF, and myself representing CRRL, will be working on a joint CRRL-CARF position paper as part of our comments to RABC. We will be drawing on some very talented technical and legal expertise, but we want your ideas as well. Contact us, VE3DSS @ VE3OY, or write to us at our home address. We'll keep you posted on developments. —Dana Shtun, VE3DSS, Vice President, CRRL/Chairman, CRRL VHF-UHF Advisory Committee ■

All letters are considered carefully. Letters are edited for clarity and may be condensed in order to have more information and readers' views presented. The publishers of *QST Canada* assume no responsibility for statements made by correspondents.

FELTON: ONE LAST TIME

□ I have to take issue with VE6ALL (Letters, 1992 January *QST Canada*, commenting on the Felton Tuning Up photo which appeared in 1991 December *QST Canada*). The R-1083/T-1083 combination was in use as early as 1936 when I started training at the Electrical and Wireless School at RAF Cranwell. I wonder if VE6ALL had the experience of operating this gear with a wind generator on the port wing. The output of the standard generator was 1000 volts at 40 mA. The generator had an interrupter ring next to the commutator, and as he states, the CW note was unmistakable—an MCW

tone of about 500 Hz. —J. E. Pollard, VE7BPL, Quadra Island, BC

WARC REPRESENTATION

□ I just read that CRRL and CARF could not agree on a representative to WARC-92, and as a result, Canadian amateurs did not have an official representative on the DOC delegation. Tell me that CRRL and CARF did not miss this opportunity to demonstrate a real and wonderfully symbolic commitment to what so many of us have been waiting for: one national organization. Tell me that members of our CRRL and CARF boards will be going into Amateur Radio history as forward

thinking, committed representatives of Canadian amateurs, and proud founders of our new national organization—not as those who destroyed the trust of Canadian amateurs. Tell me this is not destroying the formation of our new national organization. —John Hewitt, VE3PUX, Woodstock, ON

Apparently it isn't. Work on Radio Amateurs of Canada (RAC) is going ahead. For the record, 1) we received only two letters on the recent problems between CRRL and CARF, and 2) VE7GBT's comments below notwithstanding, DOC was a staunch supporter of IARU positions and Amateur Radio in general throughout WARC-92. —Editor

□ I am angry and distressed over the information in February *QST Canada*. Canadian amateurs depend on people in their two national organizations to look after their interests. That is why many of us pay fees to both organizations. For whatever reasons, both organizations let us down. Thus there was no Canadian Amateur Radio representative at WARC-92, only DOC reps who, no matter how well intentioned, would have to toe the political line. And why? Because CRRL and CARF could not agree. Why didn't they flip a coin? —Leslie D. Saul, VE7GBT, Thetis Island, BC

The Canadian Radio Relay League, Inc La Ligue Canadienne de la Radio Amateur, Inc



The Canadian Radio Relay League (CRRL) is a noncommercial association of radio amateurs organized for the promotion of Amateur Radio communications and experimentation, for the establishment of networks to provide communications in the event of disasters or other emergencies, for the advancement of the radio art and the public welfare, for the representation of radio amateurs in legislative and other matters, and for the maintenance of fraternalism and a high standard of conduct.

CRRL is incorporated under the Canada Corporations Act. Its affairs are governed by a seven-member Board of Directors elected every two years by the CRRL general membership. CRRL is noncommercial, and no one who could gain financially by the shaping of its affairs is eligible for membership on its Board.

CRRL is the Canadian member-society of the International Amateur Radio Union (IARU). "Of, by and for the Canadian Radio Amateur", CRRL numbers within its ranks the vast majority of active amateurs in the nation and has a proud history of achievement in amateur affairs.

A bona fide interest in Amateur Radio is the only essential requirement for membership. An Amateur Radio licence is not required, although full voting membership is granted only to licensed amateurs in Canada.

Membership inquiries and general correspondence should be directed to CRRL Headquarters, Box 56, Arva, ON N0M 1C0 Tel (519) 660-1200.

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Calendar



Attention: Deadline for items is the 20th of the second month preceding month of publication. For example, information should reach *QST Canada* by January 20 to be included in a March issue.

Ajax, ON: Durham Region Amateur Radio and Computer Fleamarket, 1992 April 11, at Pickering High School, Church Street, Pickering Village, Ajax. Sponsored by North Shore and South Pickering ARCs. Refreshments, commercial displays. Opens 0900. Admission \$5, tables \$10. Talk-in on VE3OSH, 147.12 MHz (+), and VE3SPA, 147.375 MHz (+). Contact Ron Brown, VE3WZ, South Pickering ARC, Box 53, Pickering, ON L1V 2R2, Tel (416) 839-3711.

Ottawa, ON: Annual Fleamarket, April 11, at Canterbury High School. Sponsored by Ottawa Valley Mobile ARC. Opens 0900. Talk-in on 147.30 MHz (+). For more information, contact Ken Barry, VE3KJB, Ottawa Valley Mobile ARC, Box 5530, Station F, Ottawa, ON K2C 3M1, Tel (613) 746-4823.

Oshawa, ON: Annual General Meeting, Southern Ontario Packet Radio Association, 9:30 EST, April 11, in the Green Room, Arts Resource Centre, Oshawa City Hall, Queen Street. Talk-in on VE3OSH, 147.12 MHz (+). Contact Alfred Bengel, VE3TIG, 679 Aruba Cr, Oshawa, ON L1J 6B7, Tel (416) 576-4839.

Toronto, ON: Ontario DX Association (ODXA) 1992 Convention, April 25 at Valhalla Inn, 1 Valhalla Rd near Pearson International Airport. Opens 0845. Speakers on a wide variety of SWL topics, SWL clinic, and banquet. Registration for all events: \$12. Banquet tickets: \$25. Contact ODXA, Box 161, Station A, Willowdale, ON M2N 5S8, Tel (416) 853-3169. ■

The Cat That Learned CW

A fluffy cat story for April...

By Arnold Rivett, VE6AXB
5 Doverglen Crescent SE
Calgary, AB T2B 2P6

This is the story of a cat that learned CW. The cats were three-month old kittens when we brought them to our small acreage from the farm of their birth. They were orange tabbies, as cute and lively as they come. We needed cats around our place to keep mice out of the house and garage. The cats were named Fluff and Blue Eyes and performed their jobs well. They made their home in the heated garage and were permitted to visit the house whenever people were home.

For several years I taught code and theory classes and I made many copies of our club's code tapes using several stereo decks set up in my garage. I probably played the whole eight-hour tape set fifty or sixty times while the kittens were growing up into cats.

I've never known a cat or dog owner who didn't talk to their pet and believe that the pet understood what was said. Those of you with pets may find out that you are better understood than you think.

One fine spring day, I was chasing some CW DX. The house was quiet. The XYL was out. I was at peace with the ether. Fluff had been sleeping on top of the transceiver. She woke up and decided that since I didn't want to play with her, she would go outdoors and terrorize the sparrow population. She walked up to the front door and meowed to be let out.

At this point I was hot on the trail of some DX, and since the DX was calling "QRZ VE6", I didn't get up to go to the door. After a couple of tries, we had progressed to "VE6AX?" and Fluff was getting impatient. Maybe she thought I couldn't hear with those things over my ears. Fluff jumped up onto the operating desk, walked over to the straight key and sent, "Pse me out".

I caught my jaw with both hands and positioned it back under my nose. Then I picked up Fluff, carried her to the door and gently deposited her on the porch. I really couldn't believe what had happened. Maybe the XYL had spiked my Coke? Maybe the pharmacist had goofed up on my stomach pills and given me something hallucinogenic?

The Coke smelled like Coke and for the past two weeks I had been taking stomach pills from that bottle, so I dug out the code oscillator and plugged in a

straight key. I usually connect a straight key in parallel with my keyer. I use it for tuning up or sending slow code. Fluff becoming QRV had shaken me up so much that I lost track of the CW pileup. I sat stunned in front of the radio.

An hour or so later, Fluff scratched at the door to be let in. I opened the door and in she walked, just as if nothing unusual had happened. She went to her food dish and ate a little, a typical delaying tactic. I watched this casual act for about two minutes, not knowing if I was losing it or not. Finally I exploded. "All right, young lady. Back to the straight key and let's finish this conversation." She looked at me and made a "whirr" as if to say, "OK, I know the jig is up."

Fluff beat me to the straight key and when I got there she was sending Vs. I don't remember the exact details of our conversation, but I did find out the extent of her vocabulary. Once I got that sorted out, I was able to reaffirm my belief in my own sanity. After all, "Pse me out" isn't exactly equal to Samuel Morse's first message, "What has God wrought?" Fluff's vocabulary ran to about fifty words, prepositions like *in*, *out*, *up*, and *down*; verbs like *come*, *go*, *stay* and *sit*; and nouns like *Fluff*, *food*, *bird*, *mouse* and *gopher*. You get the idea. She admitted that she darn well knew everything that we said to her, but that as a cat she did only what she wanted. After all, wasn't that the way the cat world worked?

Having realized the incredible potential of this most amazing discovery, I went to work to teach Fluff more words. I got a book out of the library about teaching English to new Canadians. Did you know that you can have a perfectly good conversation using only one thousand simple words? I made it my goal to teach Fluff one thousand words of basic English. I was more or less successful. I started with concepts that would be most familiar to a cat. We worked through the names of all the things in the house and garage. Verbs we could attack by acting out the actions. Some abstract concepts like hot and cold could be demonstrated. The fire in the fireplace was easily named, but Fluff wanted to know how it got started, how it burned and why the top of the electric stove got hot without fire.

One of Fluff's biggest concerns was that I talked to birds on the radio, and I would be mad at her for hunting and eating birds. She didn't really believe that the bird noises in the radio were people using code instead of speech. I know that she was convinced that somewhere out there, there was a race of giant birds that had transceivers and antennas. It took a trip to a chicken farm, my wringing a bird's neck and then plucking it, and my wife's cooking it into a chicken dinner, to convince Fluff that we eat birds too.

Finally I was ready to go public. Fluff had a vocabulary of eight-hundred seventy-five words, some idea of human customs, and a desire to perform for an audience. I used an amateur contact at the university to make an appointment to visit the university's psychology department.

It was a bright and sunny afternoon when Fluff and I arrived at the university. I set up the code oscillator in the small office they gave us to wait in, and Fluff sent me some CW.

"QTH?"

"We're in Calgary, Fluff."

"Many people. Many cars. Noisy."

"Yes, Fluff, I find it noisy too."

"What this big house?" Now that was a good question.

"These big houses name *university*."

"What why university?" OK. So I hadn't explained anything with a word.

"People come to university to learn things."

"What learn?"

"Learn Fluff with new words."

"University learn Fluff?" Perhaps. I certainly hoped so.

By this time, we had been joined by two men and three women. They watched quietly while Fluff stood on three legs and ran the key with one front paw.

One of the women spoke. "She certainly is purposeful with that."

I was beaming from ear to ear. "What did you think of her question?"

I got a blank stare. "What was her question?" Well, maybe the woman hadn't heard it at all.

"Fluff asked if the university would teach her," I said. I got a faraway look, and the four other people arranged themselves around me in a square.

The head woman spoke again. "Per-

haps we should introduce ourselves. I am Dr. Missouri. A gentleman in the Electrical Engineering Department made a request through the dean that we examine your cat in reference to some special training you have given her."

I was relieved. This was the right group. "Yes. Fluff has learned Morse code and uses it to talk to me. That's what she was doing just now."

Dr. Missouri's eyebrows rose. "I see. She talks to you in Morse code. Does she talk to anyone else? It dawned on me that all these people were wearing white coats."

I gulped. Who had Fluff talked to? "Well one day she talked to JA8KTQ, and she asked ZS2CVT what he likes to eat."

Dr. Missouri looked interested. "I don't understand those funny names, but could either of these people come in to corroborate your story?"

"Well, JA8KTQ is a Japanese amateur named Yoshi, and ZS2CVT is a South African named Gerd." I got hopeful.

"So the only people she has spoken to beside yourself are in Japan and South Africa. How inconvenient." I could tell that she didn't believe me.

One of the men spoke up. "Are you married? Does your wife talk to Fluff as well?"

I was hesitant. "Well, yes, but since my wife doesn't know Morse code, I have to translate for her." It suddenly hit me with a blinding flash. These people were civilians! They didn't know the code! This difficulty in showing off Fluff hadn't occurred to me. After all, everyone knows Morse code. Even VE6JX.

I suddenly realized how thin the ice was—the ice on which I had been standing while talking to these people. They thought I was a complete lunatic. They just hadn't decided yet if I was dangerous or not. Fluff broke the silence by keying the oscillator. "Too many words. Fluff not copy. Let's blow this popsicle stand." I was going to have to stop letting Fluff watch Teenage Mutant Ninja Turtles. "Fluff," I said, "I think you're right. Thanks, everyone."

I beat a hasty retreat. I may never know how close I came to a vacation in a quiet institution. Fluff and I headed home. At least the interview had been short and we still had the rest of the day. Fluff could hunt gophers and I could chase DX.

Fluff came into the house with me and curled up on the radio bench. I went to get an 807 and when I came back, Fluff had a paw on the up-down frequency control on the microphone stand. By leaning on the push buttons, she could listen and copy the code from different stations. She knew that I wanted to talk to chirps that had different calls. She purred and asked, "Want this station? PA0CTX?"

"No, Fluff, I said, "I have PA confirmed." I showed her the QSL card. "See? PA0JSS." Fluff keyed the oscillator

that was now the most important piece of equipment on the bench. "Fluff find new one."

I drifted around the house, putting stray glasses in the dishwasher and putting old copies of *QST* into the bookshelf. I was still shaken by my close call at the university. Suddenly Fluff was at my feet again. I walked to the radio. There was a TZ in Corsica. "Good work, Fluff. That's one we need." I let Fluff call the Corsican. He gave her a 579 and she gave him a 599. We weren't running the amplifier. Fluff was very excited.

"Card come tomorrow?"

"Not tomorrow, Fluff, but soon. Maybe ten days." Fluff was disappointed. Her concept of time was limited to yesterday, today and tomorrow. Try as I might, I was unable to get her to learn to count above five.

When the card came, she was delighted. It was addressed to "Opr Fluff". It was the big time. I guess I didn't realize it then, but I had created a new DXer. A week later, another card arrived for "Opr Fluff". By the end of the month, she had confirmed fifteen new ones. Now I knew that I had let her operate a couple of times, but not fifteen....

After dinner, I picked her up and placed her on the radio bench. I placed her carefully beside the key and said, "OK, Fluff. Fire up the rig." I guess I should have seen it coming. Fluff used her nose to push the power button. The TS-940 lit up and the friendly sound of CW came out of the speaker. I had left the antenna switch in the position that connected the rig to the log periodic. Fluff, using her nose and paws, had learned to turn on the rig, select 10, 15 or 20 metres, scan up and down the CW bands and work anyone who would answer her call. Of course, she couldn't turn the stiff controls of the linear, nor could she change the antennas, but she was at home all day with her choice of 10, 15 or 20 metres, or the three WARC bands.

I decided to let her keep operating. She delights in this. With the TS-940, she can't operate out of band or generate much in the way of QRM. She looks at the QSL cards on the wall, and if she hears a new one, she stays with it until she works it. This has done wonders for my CW total. VE6KC is in big trouble.

So that's the end of my story. I guess we are living happily ever after. Now Fluff wants to apply for her own DXCC. I've been working on the question and answer book with her, but it sure is hard to teach Ohm's law to a cat that only counts to five. The code sure isn't a problem.

I don't know if Fluff will pass her exam or not. I think I'll just let her collect QSL cards and then apply for 80-metre or 10-metre DXCC. That should work as long as Don Search doesn't notice that my first name isn't Fluff. ■

Expedition—continued from page 7

reading this article and especially to prospective Canadian VHFers who might otherwise find the 144-MHz band pretty quiet.

In total, we made over 700 contacts on 50 and 144 MHz during our two-week stay. Best 50-MHz DX was XE1GRR (DL80) from our site in EN85. Best 144-MHz DX was a tropo contact was with NØJRN (EM37) from our site in EN95. Best DX using meteor scatter on 144 MHz was K4CKS (EM74) from EN96.

We would like to thank everyone who assisted with our expedition. A special thank you to my XYL, Janice, for tolerating the "goofy hours" taken up in operating the station. We also thank John, WZ8D, who was operating from southwestern Ontario at the time and with whom we coordinated our trip, our Canadian Amateur Radio friends who were in constant contact with us and who gave us advice and assistance before and during the expedition, the many amateurs who served as relay stations and helped us complete many difficult QSOs, and to Hal, KC4YO, for the use of his TE Systems-six metre power amplifier and the custom-built portable tower base that made setting up our antennas a breeze.

We will be back this summer. Dates for our 1992 trip will be July 16–August 1—perfect dates, we hope, for six metre random scatter and sporadic-E, with some good old two-metre tropo and meteor scatter thrown in. We hope to operate from some really rare grid squares this time. Check the *QST Canada* VHF/UHF column for more information.

Bryan's signals were extremely strong in Toronto throughout his expedition. He was consistently S9 plus on both tropo and aurora. We hope that this article will encourage other amateurs to emulate his activities and put more of our rare grid squares on the map. —VE3DSS ■

WA8MZQ Equipment:

50 MHz:

Yaesu FT-736R
TE Systems 150-watt amplifier
K1FO 4-element yagi at 19 feet

144 MHz:

Yaesu FT-736R
Amateur Radio Research preamp
Commander Junior 4CX250 350-watt amplifier
Cushcraft 215-WB at 23 feet

General:

Honda generator,
Homemade tower consisting of three-sections of aluminum pipe
AR22 rotator

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Model DJ-162TD

A Complete Receiving And Sending Station In Your Hand

This 2M handy combines the best features from the most advanced handhelds available today. Built-in DTMF squelch is standard, as is a wildcard function to help you access any group code that you have programmed without recalling the exact numbers.

There are power saving features such as auto shut-off and timed LCD lighting, timed to turn itself off after 5 seconds of non-use. The display is conveniently located on top of the unit for reading when the transceiver is being carried in your pocket or in a bag. There is even a key lock mode to prevent accidental changing of frequencies, should the buttons be hit while the unit is being handled.

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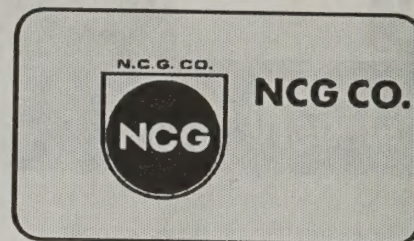
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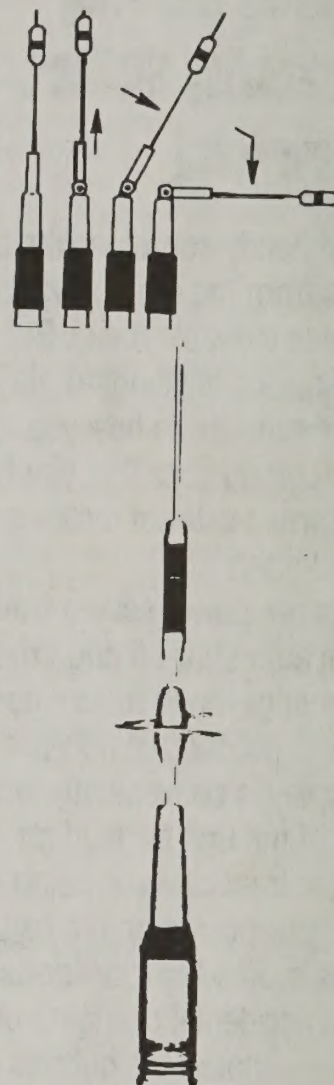
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Expedition to Manitoulin

Putting rare grid squares on the air...

By Bryan Snyder, WA8MZQ
4415 Holiday Lane
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Manitoulin Island, the world's largest freshwater island, is located in the crystal clear waters of northern Lake Huron and Georgian Bay. This island is famous for its sport fishing, and its camping, hiking and hunting. It is also a photographer's paradise.

My first visit to Manitoulin was in 1961 while I was still a junior in high school. The members of our family immediately fell in love with the beauty of this island. My parents and I still remember the friendly people, the clear blue water, the outstanding yellow perch and the fascinating colour of the northern lights in the night sky.

After finishing college and starting our own family, we returned to this majestic island many times. The trip was always a family holiday. We never really took radio equipment along. We simply wanted to spend time with the our children and fish, fish, fish!

Recently, after a four-year hiatus from any kind of vacation (putting three kids through college in the US is tough on the budget!), my wife Janice and I made plans to return to our favourite spot. We would go to Manitoulin in July, 1991.

This time I decided to take a portable VHF station with us—SSB and CW, of course—and make a major effort to operate from some of the rare grid squares that would be close to our fishing camp.

Planning for this expedition began a year in advance. In addition to procuring equipment, we purchased topographic maps, talked to several Canadian VHFers to obtain advice on good operating locations, and publicized our plans to fellow VHFers—all steps important to the success of any grid square expedition.

We left Bellefontaine, Ohio (EN80), on Thursday, July 4, and arrived at Tobermory in the evening. Tobermory is a small town at the tip of the Bruce Peninsula, the peninsula that separates Lake Huron from Georgian Bay. Tobermory boasts fine shopping and excellent accommodations. It has also become a magnet for scuba divers. The Manitoulin Island ferry leaves from Tobermory—people, cars, trucks and all.

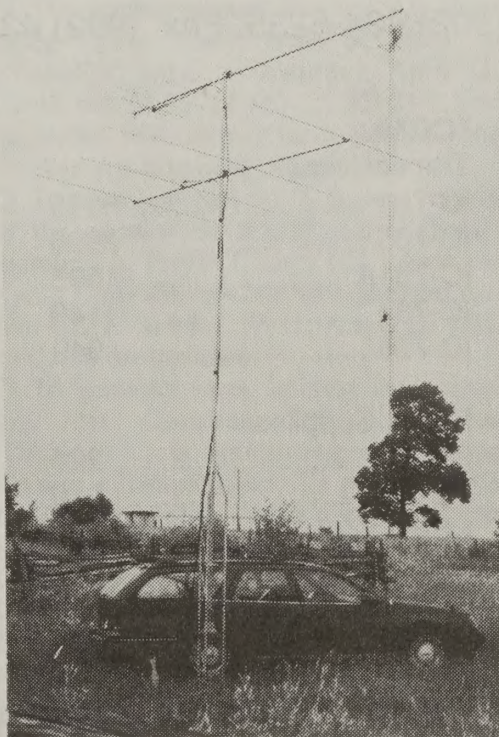
Tobermory is just inside grid square EN95. We had some time to kill, so we set up our station on a hill just south of

the town, at a spot 150 feet above the lake. We operated from this location throughout the evening of July 5, with good success on both six and two metres.

On the morning of July 6, we boarded the MS Chi-Cheemaun (in Ojibway, Chi-Cheemaun means “big canoe” or “big boat”) and headed for the island. The trip took about one hour and forty minutes. It has to be one of the most enjoyable boat rides on the Great Lakes.

We arrived at our fishing camp, solidly in grid square EN85, on July 6 at noon. After enduring a severe thunderstorm we put up our 40-metre inverted-V and began to coordinate our expedition on 7136 KHz. Being able to use 40 metres for this purpose was invaluable. Then, for the next couple of days, we concentrated on renewing acquaintances with our host family, relaxing, and filling the refrigerator with jumbo perch and smallmouth bass.

By July 8, we had set up our portable VHF station in a clearing behind the cabin



The WA8MZQ/VE3 operating site in EN93 on the northeast corner of Manitoulin Island. WA8MZQ operated from Manitoulin throughout 1991 July 8–20.

and were QRV on both six- and two-metres. It was not the best spot for two, but it worked out fine for six metres.

Our expedition to grid square EN96 began on July 10. We traveled north to a spot just inside this square, setting up at a scenic lookout halfway up the side of a mountain. The elevation was 1200 feet above sea level and we could see for miles to the south, the east and the west. We operated from here for two evenings and one full day and did pretty well considering the average band conditions and the presence of some power line noise.

After that, we took a break from Amateur Radio. Two of our three children had come up separately, and we fished and visited and had a great time. After our children returned to attend to their jobs, we decided to operate from EN95 again. This time we found a spot at the top of a hill, 1000 feet above sea level, in the northeast corner of Manitoulin Island. This location was much better than our earlier EN95 location outside of Tobermory on the mainland. We spent the evening of July 16 and the following morning operating from this location. Then we returned to our fishing camp in EN85, from which we operated during the remainder of the trip.

How did we do? Not badly. During our expedition, overall band conditions on both two and six metres were about average. There was only one “tropo” opening on two, and only three “E-skip” openings on six. The usual morning random scatter on six metres was good but never great.

Two auroral openings did help increase our QSO count on both bands. The first aurora took place on July 9, and the second on July 13. The aurora of July 13 was the better of the two and certainly the most beautiful visually. Words cannot properly describe the gorgeous iridescent blue curtains that flowed across the northern sky, spreading overhead and to the south. It was great!

During the expedition we experimented with two-metre meteor scatter by running meteor scatter schedules with stations ranging from 550–800 miles away. We completed 90% of these schedules. This should be encouraging to everyone

Expedition—continued on page 4

April/avril 1992 7

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Conducted By Ray Staines, VE3ZJ

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VE3KUF, Jim Pay, Windsor, ON
VE3NWP, C. Ed Garnett, Lindsay, ON
VE4NC, Jim Nazar, Flin Flon, MB
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VE5QB, Josie Murray, Glenavon, SK
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WARC-92: Status Quo Maintained for Amateurs

WARC-92 is over. It appears that decisions made at WARC-92 will have minimal impact on the Amateur and Amateur Satellite services.

In ITU Region 1, the Mobile Service was upgraded from secondary to primary in the broad range of 1.7–2.45 GHz, including the 2.3–2.45-GHz band used by radio amateurs. The Mobile Service is already primary on 2.3–2.45 GHz in the rest of the world. Depending on how individual administrations implement their mobile services in this range, there could be implications for the Amateur and Amateur Satellite services.

With regard to the amateur 40-metre band, broadcasting was expanded to include 7300–7350 kHz. This expansion will take effect in 2007. Several European countries, particularly the United Kingdom, felt strongly this was not enough. As a result, they stated that they were no longer willing to entertain proposals to realign the 40-metre amateur band to, say, 6900–7200 kHz, or to increase the 40-metre amateur band from the present 7000–7100 kHz allocation in ITU Regions 1 and 3. Several countries in North and South America, particularly Canada and the US, then made it clear that they would not accept a reduction of the 40-metre amateur band from the present 7000–7300 kHz allocation in ITU Region 2. Thus, the status quo was maintained.

This does not preclude a change in the future. WARC-92 did adopt a recommendation that a future conference “should consider the possibility of aligning allocations to the Amateur Service around 7 MHz with due regard to the requirements of other services”.

Apparently, IARU was disappointed that there was no improvement in the amateur allocation at 40 metres. However, given the enormous pressures exerted, particularly on behalf of HF broadcasting interests, IARU considered it a victory that amateurs emerged unscathed at 7 MHz. It was a testimony to the fine preparatory work done by IARU member-societies around the world that delegates to WARC-92 did not solve its HF broadcasting problems at the expense of the Amateur Service.

NOTES FROM ALL OVER

□ To commemorate the 75th anniversary of the Battle of Vimy Ridge, amateurs at the Canadian Armed Forces base in Lahr, Germany, have received permission to operate from Vimy Ridge on April 5–10. A special callsign has been requested. Frequencies will include 3.685, 7.055,



The IARU Observer Team at WARC-92 (left to right): Michael Owen, VK3KI, Richard Baldwin, W1RU, David Sumner, K1ZZ, Larry Price, W4RA, Dan Bergeron, KB4IYK, John Allaway, G3FKM, Wojciech Nietyksm, SP5FM, Tom Atkins, VE3CDM and David Rankin, 9V1RI. Not present: Alberto Shaio, HK3DEU. WARC-92 ended on March 3. (Photo courtesy VE3CDM)

14.145, 21.245 and 28.545-MHz SSB, and 3.515, 7.012, 14.020, 21.020 and 28.020-MHz CW. A special certificate will be available.

□ The second annual Worked All Winnipeg QSO Party will be held at 1500–2200 UTC on Saturday, April 11. Check out 14.15–14.165, 21.33–21.4, and 28.3–28.4 MHz to pick up contacts for the Worked All Winnipeg Award.

□ To commemorate the 50th anniversary of the opening of the Alaska Highway, members of Prince George (BC) Amateur Radio Club will operate special event station CZ7Z on May 29–31. A special QSL card will be available.

□ To generate more interest in contesting, the Canadian DX Association (CANAD-X) is sponsoring a Canadian Contest Championship. To participate in the Championship, send a copy of your log for any of the following contests to CANAD-X, Box 717, Station Q, Toronto, ON M4T 2N7: ARRL DX SSB, ARRL DX CW, ARRL SS SSB, ARRL SS CW, ARRL 160-Metre, ARRL 10-Metre, CQ WW SSB, CQ WW CW, CQ WPX SSB, CQ WPX CW, CQ 160-Metre SSB, CW 160-Metre CW, CARF Canada Day, CARF Winter, IARU Radiosport, and Commonwealth CW.

□ Speaking for AMSAT at the recent

Miami Hamboree, Roy Neal, K6DUE, described AMSAT's most ambitious project to date: a Phase 3D satellite. It will carry receivers at 29 MHz, 436 MHz, 1.27 GHz, 2.40 GHz and 5.60 GHz, and high-power (80–250 watts) transmitters at 29 MHz, 145 MHz, 436 MHz, 1.27 GHz, 2.40 GHz, 5.60 GHz and 10 GHz. The satellite will extend 25 feet across at the tips of its solar panels and weigh in at 1100 pounds. High-gain antennas will permit amateurs using only a few watts of power and an omnidirectional antenna to access the satellite. Target date for the Phase 3D satellite, assuming that AMSAT can raise the four million dollars that will be needed to build it and place it into orbit: October, 1995. ■

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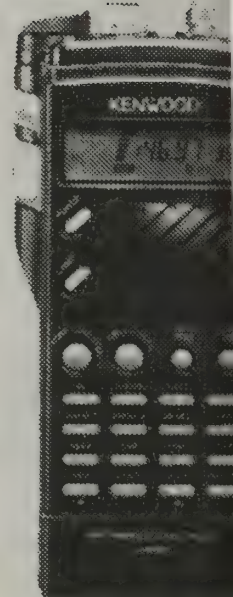


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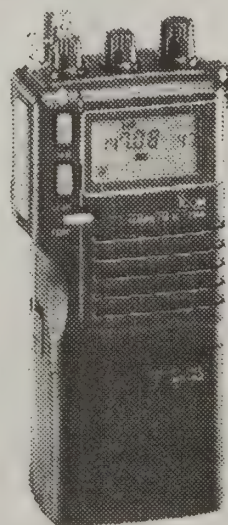
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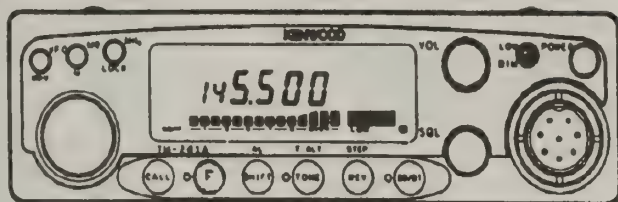
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Antenna Compendium Vol. 2	13.50	4020	<input type="checkbox"/>
RSGB HF Antennas for all Locations	17.00	4300	<input type="checkbox"/>
Antenna Notebook, W1FB	11.25	4030	<input type="checkbox"/>
Novice Antenna Notebook, W1FB	11.25	4040	<input type="checkbox"/>
Antenna Impedance Matching	17.00	4050	<input type="checkbox"/>
Transmission Line Transformers 2nd Edition	22.50	4060	<input type="checkbox"/>
Practical Wire Antennas	16.75	4090	<input type="checkbox"/>
Reflections	22.50	4070	<input type="checkbox"/>
Yagi Antenna Design	17.00	4080	<input type="checkbox"/>

TECHNICAL BOOKS

1992 ARRL Handbook	28.00	5001	<input type="checkbox"/>
ARRL Electronics Data Book 2nd Edition	13.50	5010	<input type="checkbox"/>
Interference Handbook	13.50	5070	<input type="checkbox"/>
Hints and Kinks 12th Edition	9.00	5030	<input type="checkbox"/>
RFI: How to Find It and Fix It	18.75	5021	<input type="checkbox"/>
Solid State Design	13.50	5040	<input type="checkbox"/>
Design Notebook, W1FB	11.25	5050	<input type="checkbox"/>
Spread Spectrum Sourcebook	22.50	5060	<input type="checkbox"/>

OPERATING

Operating Manual 4th Edition	21.00	5501	<input type="checkbox"/>
Complete DXer 2nd Edition	13.50	5510	<input type="checkbox"/>
DXCC Companion	6.75	5520	<input type="checkbox"/>
Transmitter Hunting	21.50	5540	<input type="checkbox"/>

PACKET/COMPUTERS

Gateway to Packet Radio 2nd Edition	13.50	6000	<input type="checkbox"/>
Proceedings 10th Conference	13.50	6011	<input type="checkbox"/>

QRP

QRP Notebook, W1FB 2nd Edition	12.00	3501	<input type="checkbox"/>
QRP Classics	13.50	3510	<input type="checkbox"/>

MISCELLANEOUS

50 Years of ARRL	5.25	7000	<input type="checkbox"/>
200 Metres and Down	9.00	7010	<input type="checkbox"/>
From Spark to Space	22.50	7020	<input type="checkbox"/>
Radio Buyers Sourcebook	18.00	7040	<input type="checkbox"/>
Wireless Communication in US	36.00	7030	<input type="checkbox"/>
Night Signals (adventure)	5.75	7200	<input type="checkbox"/>

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The CRRL Field Organization Forum

WHERE TO SEND YOUR REPORTS

A reminder to all members of the CRRL Field Organization whose reports are published here and in the Public Service column: please continue to send your reports to the CRRL Headquarters office in Arva, Ontario. Once the editor of *QST Canada* is finished with your reports, they will be forwarded to Ken Oelke, VE6AFO, the new CRRL Field Services Manager. Of course, questions, suggestions, and requests for materials related to the CRRL Field Organization are best sent directly to Ken. His address is 7136 Temple Drive NE, Calgary, AB T1Y 4E7, Tel (403) 280-5340.

REPORTS FOR JANUARY 1992

Alberta: SM: Don Wilcox, VE6CG; STM: VE6AKY; SEC/TC: VE6AFO; OO: VE6TY. This month, we'd like to catch up on some items that were missed earlier. October was quiet—or at least it seemed that way. I did not get any reports from clubs as to their activities. November was busier. Red Deer ARC helped their fair city during Crime Prevention Week by assisting at the information booth and displays in one of the Red Deer malls. The CRRL QST QSO Party, held on November 2–3, went off well from VE6QST. With the help of Russ Wilson, VE6VX, we made 115 contacts. Cards for these contacts were sent out before Christmas. Members of Calgary ARA (CARA) had two functions in November. The first was the Ham Fit and Feast Fest. Everyone met at a local city swimming pool and tried out the lap pool, the diving tank, the steam room and the jacuzzi. After everyone had worked up an appetite, they headed to the SM's QTH for a feed of chili and homemade biscuits. About 35–40 members and their families took part in this event and a good time was had by all. Later in November, Ivie Wheeler, VE6IVY, arranged a special agenda for CARA's general meeting: a tour the Canadian Airlines International maintenance hangar at Calgary International Airport. So far this year, Ivie, who is CARA's vice president, has done a terrific job scheduling interesting speakers and activities. This last activity reminded us of an old-fashioned school field trip, and was most enjoyable. December and January were both quiet with band conditions fair to good. During much of January, we were in California. Please send us your reports. 73.

British Columbia: SM/SEC: Ernie Savage, VE7FB. British Columbia Public Service Net (BCPS, 3729 kHz) Manager Jim, VE7JN, reports January check-ins: high—214, low—148, total 5590. British Columbia Emergency Net (BCEN, 3652 kHz) Manager Ray, VE7BCL, reports 1235 January check-ins. For the third month in a row, Tom, VE7BNI, has made Brass Pounder's League, this month with a total of 744. On the nets, new people are joining us all the time and trying their hand at handling traffic on CW. As a result, BCEN is doing very well. Nice to see a new name among our station activity reports: John, VE7DFX, handled 35 messages. Let's keep going, BCEN! The SM thanks all those who helped the incoming QSL manager by sending messages to those who had QSL cards waiting for them. Thanks also to all those who keep envelopes on file. 73.

Reports invited: CRRL Section Managers (SMs) and their Section-level assistants coordinate traffic handling, emergency communications and bulletin service across Canada. Your SM (name and address appears on page 2 of this *QST Canada*) welcomes reports of individual and club activities for publication in this column. Activities do not have to be related to the CRRL Field Organization or to CRRL.

Manitoba: SM: Bill Crooks, VE4JR; ASM: VE4IX; STM: VE4STU, SEC: VE4PN; NMs: VE4AGH, VE4FP, VE4LB and VE4TE. Our SEC, Dave Place, VE4PN, reports that at Pinawa, the AECL presented Garry, VE4GMS, with a quantity of hard hats for use within the Section. These hats will be distributed among various ARES groups. Dave mentions that Grahamdale has included Interlake ARC and the Interlake ARES group in its emergency plan. Dave recently visited Winnipeg ARC and gave a talk and a slide presentation about the SET held at Oakbank last fall. Dave also showed a videotape of a simulated air disaster. The tape showed how communication can play a vital role in these emergencies. The Manitoba Repeater Society is still accepting contributions to the fund for its Superlink system. The system should be in operation soon.

Maritimes-Newfoundland: Acting SM: Carl Anderson, VE1UU; STM: Mel Lever, VE1VX; BM: Brent Taylor, VE1JH. No report available. The Maritimes-Newfoundland Section does need a Section Manager. The duties are not onerous and the work can be most rewarding. Please contact the Acting Section Manager or CRRL for details.

Ontario: SM: Larry Thivierge, VE3GT @ VE3WQ; BM: VE3GSA @ VE3JF; SEC: VE3GV; STM: VE3CYR @ VE3INF; TC: VE3EGO. After two successful years on the job, Bill Birchall, VE3FQV, is stepping down as manager of the ONTARS net. This net, started by VE3BC, reached a milestone in January when it celebrated its 20th year of operation. Taking over the net: Ross Miller, VE3GRM. Thanks to Bill for his good work, and best wishes to Ross. BBS VE3NAV has switched over from MSYS to FBBSA. Whitecaners contemplating packet radio may be interested to learn that the manual for the PK-88 TNC is currently being recorded by Recording for the Blind, Princeton, New Jersey. The manual for the PK-232 has already been completed and is available from the same source. Congratulations to VE3KMJ on being named South Pickering ARC Amateur of the Year. CW and RTTY bulletins transmitted by W1AW are undergoing some important changes. The text of the bulletins in these two modes will no longer be identical. Because of schedule restraints, most CW bulletins will be shorter, headline-news versions of their RTTY counterparts. RTTY bulletins will cover news in detail and carry both a NAVTEXT header and a Bulletin ID Number (BID) for both human and automated-system identification. VE3GHZ is sporting a new FT-767GX HF rig. In May, in Sault Ste-Marie, a hobby fair will be held at Central Algoma High School where it is hoped that Amateur Radio will be well represented. It is with regret that I announce that the following have become Silent Keys: VE3BUK, VE3GG, VE3KUF, VE3NWP and VE3XF. With the help of VE3JAR, VE3JJX and VE3JJY, VE3IDJ has a five-element triband beam and VHF Boomer installed atop his 45-foot tower. After the installation, all participants and their XYs, VE3JAW, VE3JUM, and VE3MIA, enjoyed a barbecue.



Quebec: SM: Joe Unsworth, VE2ALE; STM: Jean, VE2ED; OBS: Garnett, VE2GOP. Phil, VE2FU, opère avec un vertical de trois éléments co-phase sur le 40 mètres. Son système de "ground" y inclus 132 radials. Le réseau QSN va bon train, plus de 75 stations se sont identifiées pendant le premier mois d'opération, soit en 1991 novembre. Rappelons nous que réseau QSN, opère en CW de lundi à vendredi, à 18h30 local à 3670 kHz. Bienvenu à tous. At a recent meeting of West Island ARC (WIARC), Bill de Carle, VE2QI, presented material from his article in 1992 January QST: a DSP Audio Spectrum Analyser. It uses a simple interface and software that he has developed. Contact Bill for the software or the printed-circuit board for this project. The next fox hunt in the Montreal area will be sponsored by VE2UMS. WIARC members intend to capture top spots. Le club radioamateur Laval Laurentides tiendra son écan et march aux puces le samedi 14 mars, au Centre Communautaire Grande Côte, 367 Goddard, St-Eustache, Québec. Guidage sur 147.315 MHz (+). According to the *Marcogram*, Claude Crévier, VE2OOD, has stepped down as president of Montreal ARC (MARC). Vice president Don, VE2SH/VE3RM will complete Claude's term. Heard on two metres: On the low end of 40 metres, Dave, VE2MPD, is enjoying many CW contacts with European stations, but finds that South American stations will not comply with his request to QRS and make longhand transmissions. But give credit to Dave to hang in there when it gets rough: Dave is a whitecaner. MARC reports that the following are new calls: VE2HCH, VE2HRS, VE2JJM, VE2LRN, VE2MBS, VE2NDP, VE2NEA, VE2SNR, VE2VCB and VE2ZAD. Many VE2 and VE3 amateurs were concerned about the progress of Edwin, VE3NWP (formerly VE2BHX), after Edwin suffered a stroke on Christmas Day while in Florida. Information was passed on four nets: Snowbird, Transprovincial, QRN and CJ. Jan, VE2OL, is WIARC's 1992 president. Silent Keys now include Ralph Thomas, VE3GG (formerly VE2RT), Gabriel Demers, VE2AHK, and Edwin who passed away on January 23. A hamfest will be held in Grenville, Quebec, on April 4. Lew, VE2ECQ, is now sporting a new IC-735, and Edward, G0OKV, was a visitor to the Montreal area during January.

Saskatchewan: SM: Joan Lloyd, VE5JML. The weather in VE5-land has been improving, and on some days, we've seen improvement on the HF bands as well. Seventy-five metres has been up and down, but Saskatchewan Evening Phone Net statistics show 1990 QNI this month. One session saw VE7s, VE6s, VE4s, one VE3 from Smiths Falls, Ontario, and one VE2 from Sherbrooke, Quebec, join the regular listing of VE5s on this net. The net control station was astonished at the number of check-ins and the large area that the net was covering. The Regina Emergency Communications team recently toured three local hospitals to view the Amateur Radio stations that will be used during an emergency. Many VE5s are looking forward to the Dayton Hamvention® in April. 73. ■



Talk to the World!

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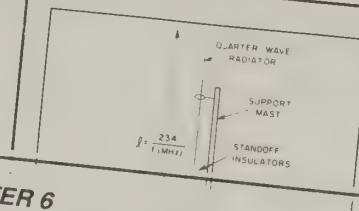
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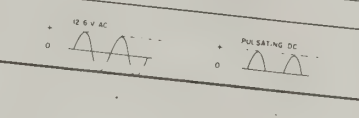



The Canadian Radio Relay League Inc.




CHAPTER 6

Practical Circuits



Ham Radio



The Quarter-Wave Vertical Antenna
The quarter-wave vertical antenna is popular among amateurs because it requires only one point of support and can be very effective, especially for DX work. See Fig. 8-17. This antenna consists of a vertical radiator a quarter-wavelength long that is tied to a number of...

complete circuits can be constructed. In other words, we are delving deeply into help you gain a basic understanding of a lot of...

...is shown in Fig. 6-... to convert the 120... a little above 13.8 V... rd to have but it is the... and battery of the type... h will operate on 13.8... able... ting, as shown by the... 8 volts (RMS) to per... e rectifier changes the...

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Order from the CRRL Bookshelf in this month's QST Canada, or from your local Amateur Radio dealer.

The Canadian Radio Relay League
Box 56, Arva, ON N0M 1C0



Our New Field Services Manager

We welcome Ken Oelke, VE6AFO, as CRRL's new Field Services Manager replacing the late Jack Strangleman, VE3GV. Ken has been an enthusiastic supporter of ARES for many years. As EC for Calgary he effectively promoted ARES and spearheaded the creation of a strong and dedicated emergency communications group. Ken also serves Amateur Radio as the SEC for Alberta and as Alberta Director for CRRL.

12-VOLT CONNECTORS

In an emergency, we will likely have to take transceivers from our shacks and automobiles, and power them from generators or automobile batteries at a variety of emergency locations. Hence, there is a requirement for standard connectors that will allow for interchangeability of power supplies. Last year, ARRL's Volunteer Resource Committee recommended MOLEX series 1545 connectors to provide this interchangeability. Unfortunately these connectors are not readily available in Canada. The connectors we select must be inexpensive and easy to obtain in order to achieve the greatest degree of interchangeability.

Some amateurs in our Kingston area use a Jones two-pin connectors. Others use Canadian Tire Corporation two-wire trailer connectors. These amateurs would have to make up a short adapter cord with the new standard connector to make their rigs compatible with any different standard connectors that might be established.

After looking over the alternatives, I propose that in Canada, we adopt as standard Radio Shack two-pin cord connectors, part number 274-8001. These are well-made connectors, and should do as good a job as those selected by ARRL, even though the two designs are not compatible. The connectors are readily available at Radio Shack stores across Canada, and appear capable of handling power requirements for even a 100-watt radio. The price of each connector is less than \$2.00 plus tax.

Fuguire 1 shows the recommended use of these connectors. Of course, polarity is important, and the recommended polarity is shown on the sketch. In your emergency kit, don't forget to include a cord with battery clips on one end and a female connectors on the other.

At this time my recommendation to standardize on these connectors should be regarded as tentative. Please let me know what you think about this proposal, and in a few months I'll pass on your views, accompanied by a final recommendation.

ARES VOLUNTEERS

From the Peel ARC Bulletin we quote the following wise words by Vic Henderson VE3FOX:

"Someone once said that volunteers were hard to find, difficult to keep and darn near impossible to work with... but absolutely essential. Experience with local amateurs has proven most of this state-

Field Organization Reports January 1992

CRRL Section Emergency Coordinator Reports

Reports were received from the following SECs (DECs and ECs reporting to SECs are listed in brackets) denoting a total ARES membership of 1145.

Reporting	ARES Members
VE3GT (VE3s AFP, LPM)	626
VE4JR	56
VE6AFO	306
VE7HJS (VE7BSL)	157

CRRL Section Traffic Manager Reports

Call	Orig	Rcvd	Sent	Dlvd	Total
VE1BTV	0	17	15	0	32
VE1NB	0	11	4	13	15
VE1ALU	1	6	1	6	14
VE1DLC	2	7	3	2	14
VE1YS	0	6	5	2	13
VE1VAR	2	1	2	2	7
VE2ED	5	11	9	7	32
VE2ALE	0	11	18	2	31
VE3ORN	12	82	72	17	183
VE3GNW	0	84	89	2	175
VE3GT	1	69	80	1	151
VE3GSQ	0	73	51	0	124
VE3AAU	2	48	47	2	99
VE3CYR	1	75	20	2	98
VE3DVE	1	35	53	2	90
VE3AJN	0	41	19	2	62
VE3WV	0	25	6	1	32
VE3SB	0	15	15	1	31
VE3LPM	1	5	9	4	19
VE3NVJ	1	6	12	0	19
VE3FS	4	5	7	1	17
VE3DBG	0	4	7	3	14
VE3MNI	2	2	8	2	14
VE3EUI	0	6	4	1	11
VE3BAJ	0	1	7	0	8
VE3GKB	1	1	2	0	4
VE4JR	0	50	30	7	88
VE4STU	2	38	26	2	68
VE4TE	0	20	5	0	25
VE5KZ	5	37	35	2	79
VE5JML	0	5	0	0	5
VE6XG	7	27	13	8	55
VECPP	5	10	10	0	25
VE6AKY	4	4	4	1	13
VE6GUS	0	5	5	1	11
VE6ABC	0	5	5	0	10
VE7BNI	98	244	367	35	7440
VE7CCJ	1	93	89	13	196
VE7ANG	1	78	77	8	164
VE7BCL	3	66	47	33	149
VE7FB	2	4	114	2	122
VE7FYL	8	35	63	9	115
VE7XA	0	42	50	19	111
VE7BZI	14	39	21	9	83
VE7DFX	3	19	14	2	38
VE7OM	0	20	18	0	38
VE7GKA	5	22	9	0	36
VE7DJ	1	29	1	0	31
VE7EJU	0	15	13	2	30
VE7EGM	3	13	7	2	28
VE7WI	5	15	4	0	24
VE7FRZ	0	13	6	1	20
VE7BCF	0	14	3	0	17
VE7VO	0	8	6	2	16
VE7CZW	0	10	2	0	12
VE7ALV	0	9	1	1	11

National Traffic System

Net (Mgr)	Sess	QNI	QTC
APN (VE1YS)	30	—	84
QSN (VE2ED)	20	113	4
KTN (VE3AJN)	13	101	10
NPN (VE3NDI)	31	401	15
OLN (VE3POJ)	30	446	34
OPN (VE3AJN)	31	654	209
OQN-D (VE3ORN)	30	103	32
OQN-E (VE3CYR)	31	110	68
OQN-L (VE3GSQ)	30	51	15
MEPN (VE4LB, inc. Dec)	62	24	2011
MMWX (VE4TE)	31	485	21
PATN (VE5NX)	28	277	17
SEPN (VE5CJ)	31	1990	12
APSN (VE6AKY)	31	1003	10
ATN (VE6CPP)	31	184	50
BCEN (VE7BCL)	31	1235	658

Brass Pounders' League

This listing is available to amateurs who report to their SM a traffic total of 500 or a sum of originations and delivery points of 100 or more for any calendar month. All messages must be handled on amateur frequencies, using standard ARRL-CRRL form, within 48 hours of receipt.

BPL: VE7BNI

Public Service Honour Roll

(1991 Revision) This listing is available to amateurs whose public service performance during the month indicated qualifies for 70 or more points in the following eight categories (as reported to their SM). Please note maximum points for each category: (1) Checking into a public service net using any mode, 1 point each, maximum 60; (2) Acting as a Net Control Station (NCS) for a public service net using any mode, 3 points each time, maximum 24; (3) Performing assigned liaison between public service nets, 3 points each time, maximum 24; (4) delivering a formal message to a third party, 1 point each, no maximum; (5) Originating a formal message from a third party, 1 point each, no maximum; (6) Serving as a CRRL SM or field appointee, 10 points for each office or appointment, maximum 30; (7) Participating in a communications network for a public service event, 10 points each event, no maximum; and (8) Providing and maintaining an automated digital system that handles messages in standard ARRL-CRRL format, 30 points. Amateurs who qualify for Public Service Honour Roll 12 consecutive months, or 18 months out of a 24-month period, will be awarded a special certificate.

PSHR: VE3ORN (167), VE2ED (133), VE3GSQ (128), VE3GT (126), VE3CYR (116), VE3GNW (110), VE3BDM (99), VE3LPM (82), VE4STU (77), VE3FS (71)

Service and Specialized Nets

Independent Net Managers: Your monthly reports are welcomed. Send to CRRL, Box 7009, Station E, London, ON N5Y 4J9.

Net (Mgr)	Sess	QNI	QTC
CRRL ONTARS (VE3GRM)	31	8899	0
GBN (VE3VW)	29	98	22
GBSSN (VE3VW)	29	46	14
Trans-Provincial (VE3EUI)	31	10983	0
Aurora 1 (VE4AHG)	28	1542	4
Aurora 2 (VE4FP)	29	1672	2
MRS (VE4HR)	8	190	0
Prairie WX (VE5EX)	31	913	0
Sask 2-Metre (VE5HG)	30	690	0
Sask ARES (VE5FY)	5	217	1
Alberta ARES (VE6AKY)	8	270	4

ment is wrong. But there is no doubt that volunteers are essential: they are the lifeblood of ARES, without which there would be no ARES.

"Why should someone volunteer for ARES? There are many reasons. It could be just to be part of the group, to serve a need to help others, to participate in the community or to satisfy some other personal need.

"There are three types of volunteers; Those who will sign their registration card and never be heard from again, those who won't sign up or participate but will be there when the "real thing" happens, and those who take an active role. The first group obviously offers little to the cause. The second group can certainly be utilized but do not provide optimum support due to their lack of familiarity with how ARES is run. The third group contains those who will determine how successful your ARES efforts are.

"So, how does one become an active ARES member? You can read all the literature about ARES, check into the nets, participate in public service events and simulated exercises, get involved in training others or take on some specific role such as maintaining the call up list. Any participation will make you an asset to the cause and will likely place you in a position where you will be able to supervise others who will show up in an emergency but are not familiar with the local emergency plan.

"Why not join up now and provide a useful service to others who will some day need and value your assistance?"

OAK BAY EMERGENCY COMMUNICATIONS GROUP

Ron Conway, VE7AHY, writing in the *Zerobeat* newsletter, describes ARES activity in Oak Bay, near Victoria, BC:

"There are about 27 people in the Oak Bay Emergency Communications Group of whom 16 are active amateurs and the remainder are CBers. Jim Davies, VE7BFJ, is coordinator and Bert King VE7FBK deputy coordinator. Several of the amateurs have equipped themselves with CB equipment. The communications group is one of several formed in Oak Bay by the Oak Bay Emergency Planning Committee. Other groups are Search and Rescue, Sea Rescue, Emergency Social Service, Health, Fire Department and Neighbourhood Zone Response. The Planning Committee is well organized and frequent meetings and communication exercises are held. In the event of an earthquake, good communications will be essential to minimize the consequential problems. The municipality is therefore taking steps to maximize the use of combined CB and Amateur Radio facilities.

"One project has been to make a bulk purchase of CB equipment for resale to amateur operators and other individuals

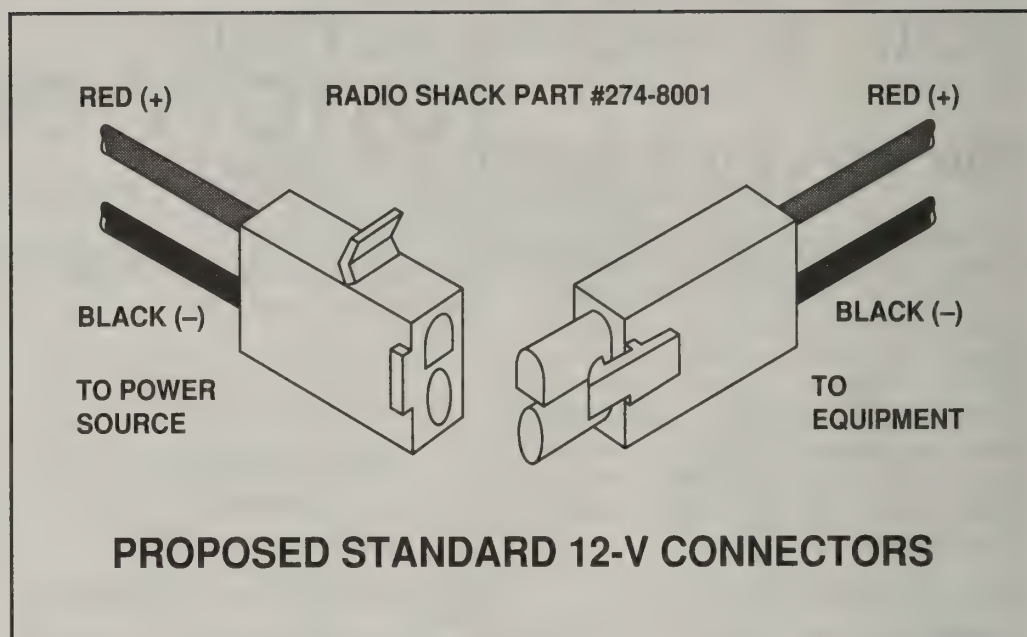


Figure 1—If everyone used the same 12-volt power connectors for their rigs, swapping power supplies in time of emergency would be a snap. VE3SV recommends that Canadian amateurs standardize on these connectors, available at Radio Shack stores across the country.

who have volunteered to participate in the organization and implementation of emergency communications for Oak Bay. The CB equipment is designed for mobile operation using magnetic mount antennas. Another purchase has been a supply of rechargeable 12-volt batteries. These batteries can be charged from a marine solar cell panel."

KINGSTON ARES

Here in Kingston we are getting ready to do our part in a major emergency exercise in May, jointly sponsored by the City of Kingston and Kingston Township. While I am in on the detailed planning as a member of the Planning Executive Committee, I cannot disclose information in advance on the scenario. I can say, however, that there will be a number of surprises, and all twenty of the participating organizations will get a good workout. Kingston ARES will provide at least two nets. One will be a two-metre net to provide communications between the exercise director and his several assistants who will be located at key points in the disaster area, and at emergency response agencies, hospitals and reception centres. The second net will provide Red Cross with communications between Red Cross Headquarters downtown and their simulated reception and inquiry centres. AEC Don, VE3AGY, and his team of Art, VE3AHU, Don, VE3CDY, George, VE3GWS, Steve, VE3GRS and Mike, VE3PRW, are hard at work developing a packet network using the ARES data program created by WN6I and N6KL. The network will use Red Cross reception and inquiry protocols, and will handle the anticipated high volume of traffic between the three major centres of activity, using laptop computers and two-metre

packet radio. We see this as a great opportunity to demonstrate the effectiveness of the packet mode to the numerous emergency response officials who will be observing and reporting on the exercise.

A FINAL THOUGHT FROM JERRY WELLMAN, WB7ULH

In his column in *Worldradio* magazine, Jerry writes:

"I'd like to encourage you to go beyond Amateur Radio talents and check out the many public service groups that exist. Amateur Radio will help you get involved, but explore other ways to be of service as well. You could teach first aid, you could fly as a search observer or you could train as a mission coordinator. There's lots you can do. You're talented people!"

As another suggestion, you might consider volunteering to join your municipal Emergency Planning Committee. If your municipality doesn't have one, why not recommend to your municipal council that one be formed? —Bob Boyd, VE3SV

We welcome submissions for this column. Photos are particularly welcome. Photos taken in vertical format will be considered for the QST Canada cover.

This column appears in both The Canadian Amateur and in QST Canada. We hope it serves as an ongoing source of news and information about ARES for members of both CRRL and CARF. A reminder that ARES is part of the CRRL Field Organization, although you do not have to be a CRRL member to take part. For more information about how to set up an ARES group, contact your CRRL Section Manager (address appears on page 3 of this QST Canada) or your CRRL Section Emergency Coordinator. —Editor ■

KENWOOD

Mobile Companion!

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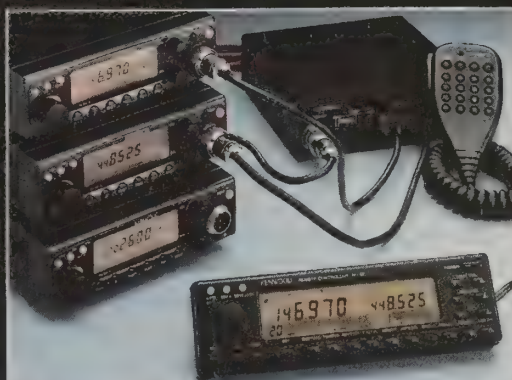
TM-441A/TM-541A

Compact FM Mobile transceivers



Here are your new mobile companions — at your service whenever you're on the road! Their compact size makes installation a snap, and the remote control options allow you to customize your installation for that "professional" look!

- **Wide band receiver coverage.** The TM-241A receives from 118–173.995 MHz. Transmit range is 144–148 MHz. (Modifiable for MARS and CAP operation, permits required.)
- **TM-441A** covers 438–449.995 MHz, and the **TM-531A** covers 1240–1299.995 MHz.
- **CTCSS encode built-in, selectable from the front panel.**
- **Selectable frequency steps** for quick and easy QSY.
- **TM-241A** provides 50 W. **TM-441A** 35 W, and **TM-541A** 10 W. Three power positions, 5, 10, and full. The TM-541A has two power positions, 1 and 10 watts.
- **20 full-function memory channels** store frequency, repeater offset, sub-tone frequencies, and repeater reverse information. **Repeater offset on 2m is automatically selected.** There are **four channels** for "odd split" operation.
- **Tone Alert System with Elapsed Time indicator.**
- **Auto-power off function, and time-out timer.**



RC-20 Remote Control Unit

As supplied, one RC-20 will control one transceiver. **Most often-used front panel functions** are controllable from the RC-20. The RC-20 and IF-20 combine to allow control of up to four radios.

- **Selective calling and pager option.** The DTU-2 option enables the Dual Tone Squelch System (DTSS), allowing selective calling and paging using standard DTMF tones.
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- **Large LCD display with four-step dimmer control.**
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- **Supplied accessories.** Mounting bracket, DC cable, fuses, MC-44DM multi-function DTMF mic.

Optional accessories

- **DRU-1** Digital Recording Unit
- **DTU-2** DTSS unit • **IF-20** Interface unit, used with the RC-20, allows more than two transceivers to be remotely controlled • **MA-700** 2m/70cm dual band antenna with duplexer (mount not supplied) • **MB-201** Extra mounting bracket • **MC-44** Multi-function hand microphone • **MC-55** (8-pin) Mobile mic. with time-out timer
- **MC-60A, MC-80, MC-85** Base station mics. • **PG-2N** Extra DC cable
- **PG-3B** DC line noise filter • **PG-4G** Extra control cable • **PG-4H** Interface connecting cable • **PG-4J** Extension cable kit • **PS-50/PS-430** DC power supplies • **RC-10** Handset remote controller • **RC-20** Remote control head
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WARC-92 Reports

WARC-92, held in Torremolinos, Spain, completed its work on March 3. IARU Region 2 Secretary Tom Atkins, VE3CDM, attended WARC-92 as part of the IARU Observer Team. Throughout the conference, the IARU Observer Team issued weekly reports. A summary of what transpired, based on these reports, appears in this month's Happenings column. The full text of Report 1 appeared in March QST Canada. The full text of Reports 2-4 appears below. —Editor

THE SECOND WEEK:

1992 February 14: The working groups of the conference have met repeatedly since our initial report which covered the first four days of the conference. Nearly all of the proposals that will be up for consideration have been introduced and discussed, but few allocations decisions have been made, even tentatively. The crunch will come next week, with Working Group 4C (above 3 GHz) scheduled to finish on Tuesday, February 18; Working Group 4A (below 137 MHz) on Wednesday, February 19, and Working Group 4B (137 MHz–3 GHz) on Thursday, February 20. Working Group 4B is meeting on Saturday morning, and it is likely there will be evening meetings next week. When the working groups have finished, there should be a virtually complete set of tentative decisions ready for presentation to the full Committee 4. What survives in Committee 4 will then go to the Plenary. No decision of the conference is cast in concrete until the final action of the Plenary, but as a practical matter, it is difficult to make changes once an issue is decided by Committee 4, because the Plenary is always reluctant to revisit matters. There is a couple of day's delay between each of these stages because of the need for documentation in three languages—English, French and Spanish—to be revised at each step.

With regard to the HF bands, Working Group 4A has tentatively concluded that several broadcasting bands above 11.5 MHz should be expanded. None of the expansions being considered above 11.5 MHz would affect the Amateur Service in any way, even at our band edges. The working group has tentatively concluded that there should not be a broadcasting band anywhere between 10.1 and 11.5 MHz. This leaves open the possibility, at some future conference, for expansion of our 10.1-MHz amateur band.

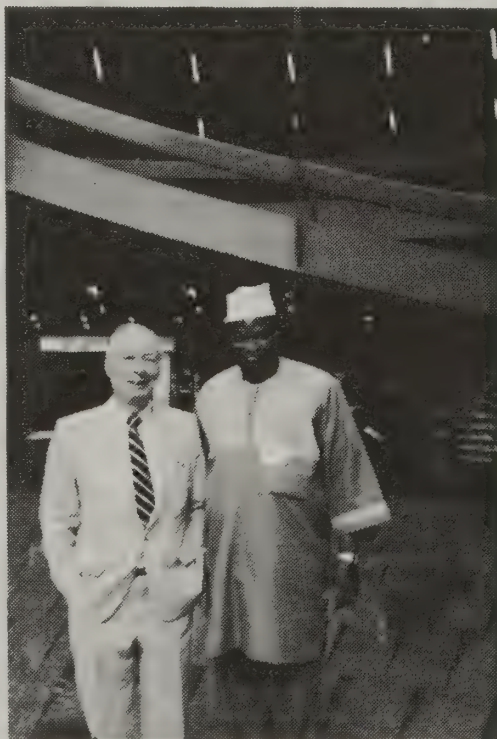
There has been further sparring over the issue of 7-MHz realignment as part of the very contentious issue of broadcasting

expansion below 10 MHz, but so far, no proposals have been considered formally because the Chairman of Working Group 4A, Mr Hess of Denmark, is offering working group members the maximum opportunity to reach satisfactory compromises informally. It appears likely that the conference will agree to some broadcast expansion below 10 MHz, but it remains to be seen how much, whether 7 MHz will be involved, and how difficult it will be to arrive at a decision. The IARU Observer team continues to work for a 300-kHz worldwide amateur allocation, but the larger issue is a very difficult one indeed.

In Working Group 4C, at 2300–2450 MHz, European proposals to upgrade the Mobile Service from secondary to primary in ITU Region 1 (Europe and Africa) are being considered. The Mobile Service is already primary in ITU Region 2 (North and South America) and ITU Region 3 (Asia and the Pacific). As expected, US proposals have been introduced for satellite sound broadcasting at 2310–2360 MHz, and for mobile-satellite uplinks at 2390–2430 MHz. Neither is in alignment with the initial proposals of other administrations. The IARU Observer Team is trying to make sure that the various telecommunications administrations are aware of our continuing and future requirements in this frequency range.

At 76–81 GHz, the Russian proposal

Below, VE3CDM at WARC-92 with Oyekunle Ajayi, 5N0OBA, of the Nigerian delegation.



for downlink frequencies for very-long-baseline radio interferometry (VLBI) has not yet been resolved. A number of administrations are supporting some protection for the Amateur and Amateur Satellite secondary allocations here. The IARU Observer Team feels that our primary status at 75.5–76 GHz is sufficient protection at this time.

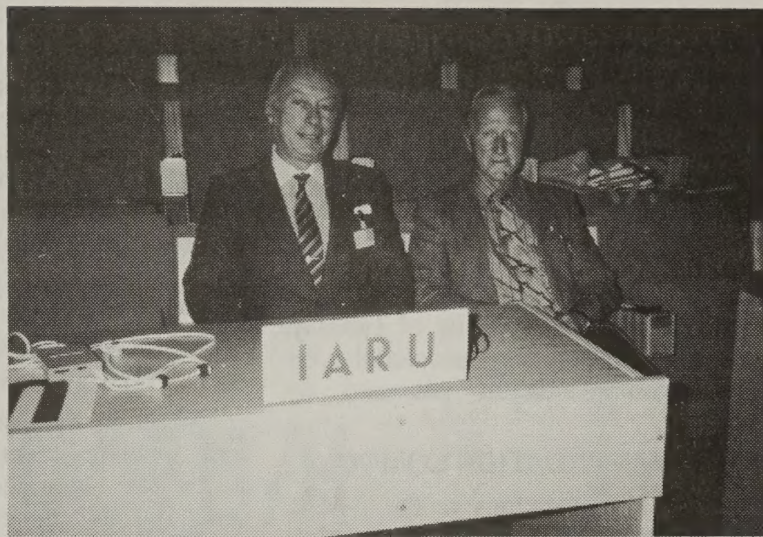
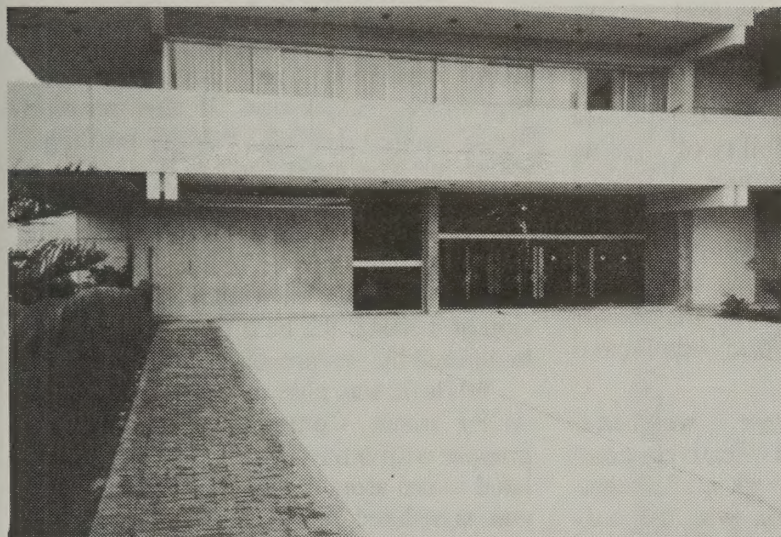
With regard to wind profiler radars, the US had sought 440 MHz as an interim frequency for these radars. The IARU position is that identifying specific frequencies for this application should not be done until completion of the relevant CCIR studies. It appears that the conference agrees with the IARU position. Late in the week, the US withdrew its proposal. It should be noted that specific frequencies for wind profiler radars was not on the agenda for this conference. A future conference may deal with this issue.

Each day at the conference, members of the IARU Observer Team meet informally with members of the national delegations, particularly with those who are on their delegations to represent the Amateur and Amateur Satellite services. On February 12, the IARU team held an hour-long meeting with the following delegates to underscore the fact they are an integral part of the Amateur Radio team here at WARC-92:

Oyekunle B. Ajayi, 5N0OBA, Nigeria
D. D. Devan, 9M2DD, Malaysia
David Evans, G3OUF, United Kingdom
Masayoshi Fujioka, JM1UXU, Japan
Peter Hall, SM0SK, Sweden
Ron Henderson, VK1RH, Australia
Fred Johnson, ZL2AMJ, New Zealand
Mirko Mandrino, YT7MM, Yugoslavia
Marcel Micili, I4SN, Italy
Y. S. Park, HL1IFM, Republic of Korea
Paul Rinaldo, W4RI, United States
Ben Samsu, YB0EBS, Indonesia
Sigge Skarsfjall, SM5KUX, Sweden
David Wardlaw, VK3ADW, Australia

In all there are about 40 countries among the approximately 1000 delegates from 113 countries. Most, of course, are here in professional capacities—a testimony to the correlation between an interest in Amateur Radio and success in a telecommunications career.

On Thursday, February 13, IARU hosted a reception attended by approximately 250 delegates. It was not possible to invite everyone. IARU did invite all known radio amateurs as well as delegation leaders, committee chairmen and key spokesmen on matters that could affect the Amateur and Amateur Satellite services. The reception was a great success, giving the



Left: the Palacio de Congresso where WARC-92 was held. Right: IARU Region 2 Secretary Tom Atkins, VE3CDM (left) relaxes with

IARU Region 1 Secretary John Allaway, G3FKM, prior to the start of next session at WARC-92. (Photos courtesy VE3CDM)

opportunity to have substantial discussions with a large number of delegates who would be difficult to reach during the day, as well to a build up a lot of goodwill. Next week, there should be a lot to report.

THE THIRD WEEK:

1992 February 21: Consideration of HF broadcasting expansion reached a climax in Working Group 4A and Committee 4 this week. The apparent result: less broadcasting expansion in the important bands below 10 MHz than had been sought, and no change at 7 MHz for radio amateurs.

In Working Group 4A on Monday, February 17, it was evident that the two camps—those favoring no change, and those favoring broadcasting expansion below 10 MHz on the order of 700 kHz—had not moved significantly closer together. To break the deadlock, the chairman proposed an expansion of 300 kHz, exact frequencies not yet specified, to take effect in 2007. He asked the group to bear in mind the possibility of sharing with the Fixed Service on a day/night basis. The broadcasting requirement is predominantly for night time when Fixed Service usage drops. However, his proposal led to very little movement.

In his next attempt, on Tuesday, February 18, the chairman proposed that a small, informal group, representative of all interested parties, meet outside the formal meeting and attempt to fashion a compromise. The makeup of this informal group was the subject of lengthy wrangling which ultimately led to the appointment of four members from Region 2 (North and South America), two from Europe, three from Africa, two from Asia, and one from the Arab community. The group met privately for several hours in the evening, emerging with a compromise that reflected the strong majority, but not the unanimous, view of the group. The compromise proposal for broadcasting expansion that emerged was as follows:

18,900–19,020 kHz	120 kHz
17,480–17,550 kHz	70 kHz
15,600–15,800 kHz	200 kHz
13,570–13,600 kHz and	
13,800–13,870 kHz	100 kHz
11,600–11,650 kHz and	
12,050–12,100 kHz	100 kHz
9,400–9,500 kHz	100 kHz
7,300–7,350 kHz	50 kHz
5,900–5,950 kHz	50 kHz

All allocations would be worldwide and available for broadcasting by 2007, with expansion bands available only for SSB with reduced carrier, and with the Fixed (and in some cases, Mobile) services able to continue using the bands on a secondary basis for communication within national boundaries. This was considerably less than the broadcasters were seeking, but all they could get in the face of determined opposition to broadcasting expansion below 10 MHz.

The package was agreed to by Working Group 4A on the morning of Wednesday, February 19, with a number of countries, notably the United Kingdom, objecting to the small amount of broadcasting expansion at 7 MHz.

The next order of business for Working Group 4A was consideration of consequential changes to the amateur allocations at 7 MHz. Because of the small amount of broadcasting expansion achieved at 7,300–7,350 kHz, the mood of the European countries changed. They had linked improvement in the amateur situation to broadcasting expansion. Mexico and Sri Lanka supported consideration of amateur realignment. Canada and the United States made it clear that they would not accept any reduction in the 300 kHz amateur allocation in Region 2. The bottom line was that Working Group 4A recommended no change to the amateur allocations at 7000–7300 kHz.

The issue then went to the full Committee 4. On the morning of Friday, February 21, Committee 4 accepted the working group's recommendations. Committee 4

did not quite complete consideration of Working Group 4A's report that day, and the matter of realignment of the 7-MHz band would be carried over for further discussion next Monday. A possible outcome of this discussion is the adoption of a recommendation seeking reconsideration for the 7-MHz amateur band at a subsequent conference. This is because several administrations, notably Switzerland, Malaysia, Sri Lanka, Mexico, and Indonesia expressed disappointment that more had not been done for radio amateurs.

Of course, any matter agreed to in Committee 4 could be reconsidered by the Plenary, which next meets on Tuesday, February 25. Some countries, including the United States, are seeking support for more for broadcasting at 7 MHz, but many delegates regard the HF matter as a settled. Removal of a single "brick" from the compromise package could cause the whole "house" to collapse.

"No change at 7 MHz" was somewhat disappointing to the IARU Observer Team, which had hoped for some improvement to the 100-kHz amateur allocation in Regions 1 and 3, while not reducing the 300-kHz amateur allocation in Region 2. But given the enormous pressure for the Broadcasting and Fixed services, the team considered it a great victory to emerge from the conference unscathed at 7 MHz. It is a testimony to the preparatory work done in many countries that the conference did not consider solving its broadcasting problem at the expense of Amateur Radio.

Working Group 4C agreed to the Russian proposal for secondary VLBI allocation at 74–84 GHz. This was approved by the full Committee 4, but only after a spokesman for the United States was satisfied that no constraints would be placed on the Amateur and Amateur-Satellite services as a result.

Working Group 4B continues to experience great difficulty reaching an agreement about allocations in the 1–3-GHz

range. As a result, the picture is still unclear with regard to our future sharing partners at 2300–2450 MHz. As this WARC Report is being prepared, Working Group 4B is meeting until 11 p.m. every night in an effort to complete its work.

THE FOURTH WEEK

1992 February 28: For the IARU Observer Team, the highlights of WARC-92 took place on the evening of Tuesday, February 25. Committee 4 adopted the following recommendation proposed by Mexico:

RECOMMENDATION COM4/C

Alignment of Allocations in the 7-MHz Band Allocated to the Amateur Service: The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992)

Considering:

- a) that it is desirable to have worldwide exclusive allocations for the Amateur and Broadcasting services in the bands around 7 MHz; and
- b) that the sharing of frequency bands by these services is undesirable and should be avoided; and
- c) that a number of administrations have made proposals to this conference for the alignment of the allocations to the amateur service around 7 MHz; and

d) that this conference was able to give only limited consideration to these proposals;

Recommends that a future competent World Administrative Radio Conference should consider the possibility of aligning the allocations to the Amateur Service around 7 MHz with due regard to the requirements of other services; and

Invites the Administrative Council to place this recommendation on the agenda of the next competent World Administrative Radio Conference.

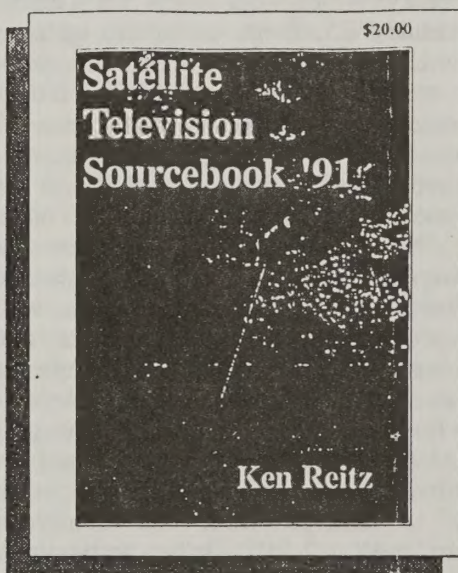
Adoption by Committee 4 went amiably, without dissent, and effectively completed the committee's work on HF matters. The recommendation was the only way in which the realignment issue could be addressed in following the adoption of the compromise package for HF broadcasting expansion. Malaysia, Nigeria, Canada, Singapore, and Japan all spoke in support of the recommendation, although Singapore qualified its support by saying it supported worldwide realignment and additional spectrum for amateurs, but not if this focused on 7100–7300 kHz.

At time of this report, the recommendation had been submitted by Committee 4 to the Editorial Committee and by the Editorial Committee to the Plenary, but had not yet been considered by the Plenary which will meet on Saturday, February 29. It appears that WARC-92 will go

on record as favoring the consideration of 7-MHz realignment at an unspecified future conference, not contingent upon broadcasting expansion. If this position holds through the final Plenary meetings, it can only be interpreted as a significant expression of support for the Amateur Service. IARU came to WARC-92 knowing our requirements could be considered only as a consequence of broadcasting expansion at 7 MHz; the next time, we will not be limited by this precondition.

While it was able to wrap up its work on HF issues, Committee 4 continues to grapple with a number of difficult interrelated issues around 2 GHz. The committee was scheduled to finish its work on the night of Thursday, February 27th, but was not able to do so and will have to meet late into Friday. At time of preparing this report, it is still not possible to report or even predict the outcome on the proposals affecting the 2300–2450 MHz band, other than to say that Committee 4 has tentatively agreed that the Region 1 secondary allocation to the Mobile Service should be upgraded to primary except where the upgrade might conflict with other changes to be adopted by the conference.

We should know more about the changes around 2 GHz next week, as the conference proceeds, somewhat uncertainly, toward its scheduled closing on Tuesday, March 3. ■



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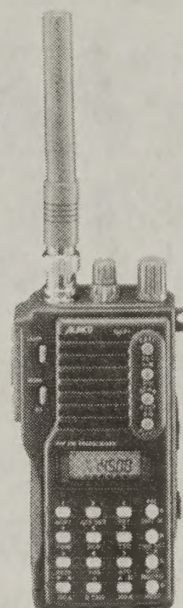


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
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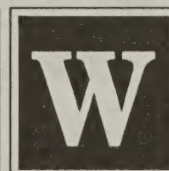
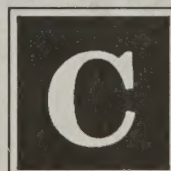
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